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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/089,907	07/09/2002	Xiaoning Nie	57265 (45107)	1262
21874	7590	06/13/2005	EXAMINER	
EDWARDS & ANGELL, LLP P.O. BOX 55874 BOSTON, MA 02205			PAN, DANIEL H	
			ART UNIT	PAPER NUMBER
			2183	

DATE MAILED: 06/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/089,907

Applicant(s)

NIE, XIAONING

Examiner

Daniel Pan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 April 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 13-24 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 13-18 and 20-24 is/are rejected.  
7) ☒ Claim(s) 19 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 05 April 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

1. Claims 1-12 have been canceled. Claims 13-24 remain for examination.
2. Claims 13-16, 20-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alpert et al. (5,559,986) in view Irwin et al. (5,841,771).
3. Claims 17, 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Alpert et al. (5,559,986) in view Irwin et al. (5,841,771) as applied to claims 13, 14, 15, 16 above, and further in view of Berg (4,196,470).
4. No change has been made in the amendment.
5. The rejections are maintained and incorporated by reference the last Office action 01/06/05.
6. The response filed on 04/06/05 by applicant has been fully considered but it is not persuasive.
7. In the remarks, applicant argued that :
  - a) Alpert does not teach two data buses connected to two execution units, respectively, one of the data bus having a lower transmission rate than the other data bus;
  - b) Irwin does not teach a plurality of execution units.
8. As to a) above, Alpert taught a plurality of execution units operated in parallel (see fig.2 [203][204][205]). Alpert did not specifically show the one of the data buses was slower (or lower in transmission rate) than the other as claimed. However, Irwin disclosed a system including first data bus (header) which had lower transmission rate than a second data bus (see the fifth octet of header occupied 2 times the interval of

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one octet in 01.24, lines 60-67) which had a lower rate than the second bus (see the 4 octets per 25.7ns in col.25, lines 9-13, see also the separate header bus and payload bus in fig.9). It would have been obvious to one of ordinary skill in the art to use Irwin in Albert for including the slower rate bus as claimed because the use of Irwing could provide the capability of Albert to adapt to different rate, and therefore increasing the ability to accept a predestined set of clock speed, and one of ordinary skill in the art should be able to recognize the advantage of using variable rate, as taught by Irwing, into Alpert in order to achieve the flexibility of the bus, and for the above reason provided a motivation. Alpert is used as primary reference because it showed clearly the plurality of execution units in parallel (see parallel execution' in col.5, lines 38-41, lines 62-63). See also citations and discussions in Page 3 of the last Office action on 01/06/05.

9. As to b) above, Irwin does not specifically show a plurality of execution units, but it showed a plurality of parallel data conducts (see col.6, lines 25-30), and it also showed the reading of the data entities simultaneously (see col.7, lines 35-40). It would have been obvious to one of ordinary skill in the art to recognize the need of providing parallel execution units with the use of parallel conducts and simultaneous data reads in order to maximize the processing bandwidth, and in doing so, provided a motivation.

10. Claim 19 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. None of the prior art of record further teaches

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the combined features of the path leading to the first execution unit was temporarily deactivated by the instruction read out means via the decoding means if momentarily no instruction had to be executed by the first execution unit.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Pan whose telephone number is 703 305 9696, or the new number 571 272 4172. The examiner can normally be reached on M-F from 8:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chan, can be reached on 703 305 9712, or the new number 571 272 4162.

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The fax phone number for the organization where this application or proceeding is assigned is 703 306 5404.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

***21 Century Strategic Plan***

DANIEL H. PAN  
PRIMARY EXAMINER  
GROUP

